Next steps for 6renum work

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IETF 85
November 2012
Introduction

• Some items need to be implemented and/or deployed.
  – No IETF design work to be done.
  – Maybe BCP or Informational documents needed?
  – In 6renum, v6ops or opsawg?

• Other items need to be specified.
  – IETF specifications needed.
  – In appropriate WGs
Implementation and deployment advice (1)

• Use names, not addresses
  – For device configuration (e.g. printers)
  – For IPsec security associations [RFC2407]

• Consider use of SLP

• Deploy ULA prefix to stabilise addresses used for internal traffic
Implementation and deployment advice (2)

- Use IPAM / asset management tool, or more generally an Operational Support System, to populate DNS, reverse DNS, DHCPv6 and router configurations.
  - Use DNS names or parametric names in configuration files
  - Include servers in DHCPv6 to avoid manual configuration
  - Use Secure Dynamic DNS Update [RFC3007] (requires key management in the management tool)

- Plan a renumbering procedure [RFC4192], [draft-ietf-6renum*]
Implementation and deployment advice (3)

• **Support**: The management tool will need the following, or equivalent:
  – DHCPv6 RECONFIGURE/RENEW [RFC3315]
  – DHCPv6-PD [RFC3633]
  – ICMPv6 router renumbering [RFC2894]

• **Avoid** software license systems that rely on IP addresses
Specifications needed

• Reconcile use of DHCPv6 and RA in an enterprise network
  – DHCPv6 and ND state machines influence each other
  – What should a DHCPv6-configured host do when it receives RA messages containing a new prefix? Current implementations just configure the new prefix. Is this OK?
  – What should a SLAAC-configured host do when it receives RA messages with "M" set?
  – See analysis in draft-liu-6renum-dhcpv6-slaac-switching

• Bulk DHVPv6 RECONFIGURE mechanism

• Clarify how a MIPv6 host rebinds with its home agent if the latter is renumbered while mobile is disconnected.
Questions? Discussion?